

## **IN THE SPECIFICATION**

Please replace paragraph [00015] on page 5 with the following amended paragraph:

[00015] Figure 2 is an exemplary diagram of a message to convey network layer information according to one embodiment of the invention. In Figure 2, a message is shown for an implementation of the invention with Internet Protocol Control Protocol (IPCP) as the NCP. The Active Discovery Network (ADN) message shown in Figure 2 includes a field 201 for a host MAC address and a field 203 for a remote access concentrator's MAC address 203. The message also includes a field indicating the type of message 205 (e.g., discovery stage, session stage, etc.) and a code for the message 211. A field 207 and 209 indicate a version and type of protocol for the session respectively. A session ID field 213 uniquely identifies a session. A field 215 indicates the length of the message. The message shown in Figure 2 includes two tags 204, 206. Both tags 204, 206 are IP\_ROUTE\_ADD tags. In other implementations, tags would correspond to the NCP being implemented. In this example, each tag includes a field 217 to indicate the type of tag and a field 219 to indicate the length of the tag. Each tag also includes a tag value field 221. The tag value field 221 indicates a destination network number, a destination network mask, a gateway IP address, and a metric value.

Please replace paragraph [00017] on pages 5-6 with the following amended paragraph:

[00017] Figure 3 is an exemplary diagram illustrating multiple communications sessions according to one embodiment of the invention. In Figure 3, a session 303 and a

session 305 have been opened on a host 301. The host 301 is connected to a customer premise equipment (CPE) 307 (e.g., cable modem, DSL modem, etc.). Data is transmitted from the CPE 307 into a regional data network cloud 309 (e.g., DSL, cable, wireless, etc.). The data is received from the regional data network cloud 309 by a remote access concentrator (RAC) 311. Each session 303, 305 establishes a connection with the RAC 311. The RAC determines network information for an account corresponding to the session 303. The network information for the account corresponding to the session 303 indicates a content server 315. The RAC creates a message with network information for the content server 315 and its IP address, inserted as the gateway IP address in the message. The RAC then transmits the message to the session 303. The RAC also retrieves network information for the account corresponding to the session 305. This network information indicates a content server 313. The RAC creates a message for the session 303-305 with the network information for the content server 417-313 and the RAC's IP address as the gateway IP address. A user at the host 301 can open the session 305-303 to connect to the user's corporate network, assuming the content server 315 is a part of the corporate network. The user can open the session 403-305 to access the user's ISP. The content server 313 is in the ISPs point of presence (POP). Data corresponding to the session 303 flows on a path from the host 301 to the content server 315. Data corresponding to the session 305 follows a path from the host 301 to the content server 313.

Please replace paragraph [00018] on pages 6-7 with the following amended paragraph:

[00018] Figure 4 is an exemplary diagram illustrating multiple communications sessions according to one embodiment of the invention. In Figure 4, a session 303-403 and a session 305-405 have been opened on a host 401. The host 401 connects to a CPE 407-405. The CPE 407-405 transmits data into a regional data network cloud 409-407. The regional data network cloud 409-407 forwards data to two remote access concentrators 411, 413. The session 405 establishes a connection with the RAC 413. The session 403 establishes a connection with the RAC 411. The RAC 413 retrieves network information for an account corresponding to the session 405. The network information for the account indicates a content server 415. The RAC creates a message including the network information of the content server 415 and the IP address of the RAC 413 as the gateway IP address. The RAC 413 transmits the message to the session 405. The RAC 411 retrieves network information for an account corresponding to the session 403. The network information for the account accessed by the session 403 indicates a content server 417. The RAC 411 creates a message with the network information for the content server 417 and the IP address of the RAC 411 as the gateway IP address. The host 401 inserts a route to the content server 415 with the information from the RAC 413 and a route to the content server 417 with the information from the RAC 411. In one example, a carrier which owns the regional data network opens their network to separate ISPs. The user at the host 401 has an account with both ISPs. One ISP owns the RAC 413 and offers a premium service (high-speed gaming, video, etc.). The other ISP offers e-mail and conventional access to the Internet. The user can access the premium service and the conventional Internet access with two sessions. Using the accounting features of PPP, each ISP can track use of their individual services for billing, monitoring, traffic control, etc.

Please replace paragraph [00019] on pages 7-8 with the following amended paragraph:

[00019] Figure 5 is an exemplary diagram illustrating multiple communications sessions according to one embodiment of the invention. In Figure 5, a session 503 and a session 505 have been opened on a host 501. The host 501 connects to a CPE 507, which transmits data from the host into a regional data network cloud 509. Data from the regional data network cloud 509 is received at a network element 511. Both sessions 503 and 505 establish a connection with the network element 511. The network element 511 includes a virtual network element 513 and a virtual network element 515. The network element retrieves network information for an account corresponding to the session 503. The network information for that account indicates the virtual network element 513. The network element 511 creates a message with the network information and its IP address as the gateway IP address and transmits the message to the session 503. The network element 511 also accesses information for an account corresponding to the session 505. The network information for the account corresponding to the session 505 indicates the virtual network element 511515. The network element creates a message with the network information of the virtual network element 515 and the IP address of the network element 511 as the gateway IP address. The network element 511 transmits the message to the session 505. A user may have an account with two separate Internet services. One service may offer conventional Internet access. Another service may offer guaranteed security for online purchases for a higher access price. The user would search for items in a session connecting to the conventional Internet service. When the user decides to

purchase an item, the user can open a session to the more costly secure service to make the purchase.